

REMARKS

Claim 2 was neither rejected nor listed as allowed or objected to. Clarification is requested if a further office action is issued.

Rejection Under 102(b) over Welhart et al.

Claims 1 and 5-8 have been rejected as anticipated by the Welhart patent, U.S. Patent 3,810,815. Applicant respectfully traverses the rejection.

Applicant claims a method having at least two steps, a first step of forming a laminate and a second step of annealing the laminate. The annealing step is defined as a heating step. Page 3, line 21; page 6, line 6.

The Welhart patent teaches a method in which, in a single step, cast sheets of poly(methyl methacrylate) and polycarbonate are formed into a laminate with heat and pressure. Column 3, lines 5-10. The Welhart patent does not teach or disclose a second step in which the laminate is formed is then annealed according to the present invention.

For anticipation, the prior art reference must teach each and every element as set forth in the claim. The Welhart patent does not teach forming a laminate and then annealing the laminate as set forth in the present claims.

For these reasons, Applicant submits that the Welhart patent does not anticipate the present invention. Applicant respectfully requests withdrawal of the rejection and reconsideration of the claims.

Rejection Under 103(a) Over Welhart et al. in View of Bonk et al.

Claims 4 and 9-29 have been rejected as unpatentable over the Welhart patent, U.S. Patent 3,810,815, in view of the Bonk reference, U.S. Patent No. 6,082,025.

Applicant respectfully traverses the rejection.

The Welhart patent teaches that its invention relates to a process for forming transparent plastic laminate for aircraft windows and canopies. Column 1, lines 19-29. While poly(methyl methacrylate) had been used, that material lost strength at temperatures of 230-250°F, which the part may be subject to when an aircraft exceeded Mach 2.0 speed. Column 1, lines 43-45 & 55-60. To overcome this problem, the Welhart patent proposed a laminate of poly(methyl methacrylate) and polycarbonate because the latter retains its high strength in the range of 250-400°F. Col. 1, lines 64-66. Before, poly(methyl methacrylate) and polycarbonate sheets had been bonded with adhesives, but the presence of adhesive produced poor optical qualities, col. 2, lines 29-32, that would be unsuitable for aircraft windows and canopies. The Welhart patent objective was to produce high strength, transparent laminates suitable for windows, windshields, and canopies of aircraft. Column 2, lines 36-50.

The Office Action proposes modifying the Welhart method by replacing the Welhart poly(methyl methacrylate) and polycarbonate with an elastomer and a polymeric barrier layer. A prima facie case of obviousness cannot be supported if a modification of the teachings necessary to support the rejection destroys the intent, purpose, or function of the reference. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). The Welhart reference is concerned with making a high strength

laminates for aircraft windows. There is no motivation to, instead, make an elastic, gas-retaining laminate. There must be some suggestion in the reference itself that the modification would be desirable – not just possible, but actually desirable – as well as a reasonable likelihood of success. The Welhart patent teaches that high strength at elevated temperatures is what is required for its laminate, not flexibility. It appears that the Bonk materials would be particularly unsuited to the Welhart invention.

Further, the combination of these references (were there motivation to make it) would not make the steps of Applicant's process obvious. The Welhart patent teaches applying heat and pressure to stacked cast sheets of poly(methyl methacrylate) and polycarbonate to form a laminate. In contrast, the Bonk patent teaches forming a polymeric composite with at least 10 microlayers, and even up to 1000 layers, col. 7, lines 5-18, of alternating materials by extrusion of the polymer melts through multi-layer feed blocks that direct the layered stream into a static mixer or layer multiplier, col. 13, lines 57-64. The individual layers are typically about 2.5 microns thick. The Bonk patent method of forming its laminate is completely different from the method of the Welhart patent. The Welhart method would seem unsuitable for forming a laminate of 10 to 1000 microlayers, even if there were some motivation in the Welhart patent to make its aircraft windows laminate from entirely different materials.

More importantly, neither patent teaches or discloses any treatment of a laminate after it is formed. There is no obviousness where the combination of references fails to disclose or suggest each and every element of the claim. While

both references teach forming a laminate, albeit by irreconcilably different methods, neither suggests anything about a post-treatment of a laminate to improve interlayer adhesion (or for other reasons). Further with regard to claims 10-15 and 20-25, neither reference suggests any kind of treatment of a laminate following a blow molding step.

In view of the deficiencies of the cited references, Applicant respectfully requests reconsideration and allowance of the claims.

(As an aside, the inventor's name on the '025 patent is Bonk, not Blonk.)

Rejection Under 103(a) Over Welhart et al. in View of Wang et al.

Claim 3 has been rejected as unpatentable over the Welhart patent, U.S. Patent 3,810,815, in view of the Wang patent, U.S. Patent No. 6,124,007. Applicant respectfully traverses the rejection.

Applicant sees no motivation for one practicing the Welhart method to (1) substitute the Wang materials AND (2) add a further annealing step that neither patent mentions. Like the Bonk patent, the Wang patent is concerned with a flexible laminate (a balloon). Substitution of such materials would be inappropriate to the purposes and objectives of the Welhart patent. The Wang issues for angioplasty balloons do not speak to the problems of aircraft window with which the Welhart patent is concerned. There is no motivation here to make the combination.

But even were there motivation to look to the Wang balloon to improve the Welhart laminate, neither patent teaches or suggests a method that includes a first

step of forming a laminate and a second step of annealing that laminate according to Applicant's invention.

In view of the deficiencies of the cited references, Applicant respectfully requests reconsideration and allowance of this claim.

The Examiner is invited to telephone the undersigned if it would be helpful for resolving any issue.

Respectfully submitted,



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